Wednesday, January 22, 2014

Sharp-tailed Grouse Advisory Committee

Attendance:

- Kris Johansen, DNR Wildlife
- Nancy Christel, DNR Wildlife
- Craig Kopacek, DNR Wildlife
- Bob Hanson, DNR Wildlife
- Gary Dieck, Wisconsin Wildlife Federation
- Dave Evenson, Wisconsin Sharp-tailed Grouse Society
- Marcell Wieloch, Wisconsin Conservation Congress
- Scott Hull, DNR Science Services
- Tom Doolittle, U.S. Forest Service
- Michael Hardy, UW-Madison
- Mark Schmidt, DNR Wildlife
- Krista McGinley, DNR Wildlife
- Scott Walter, DNR Wildlife

NW Sands Coordinator Activities & Opportunities

- Talk to Wildlife people first, then to Forestry, and so on. The message is that this is a value-added position that's not taking work away from people. Bob Hanson is still a DNR biologist, and he's got to do all the things the other biologists have to do.

- Fred Strand wants to see the NW Sands plan implemented. Bob will be working on other plans (like the Sharp-tailed Grouse Management Plan), the Corridor Plan, etc. He'll be going around with ideas for biomass harvesting, forest certification, invasive species management, wildlife survey work (which is vital, in that it provides evidence that all the other work is effective). He'll be looking for ways to prove economical and ecological feasibility. He'll be participating in training sessions with other staff.

- Bob will serve as a point of contact for prescribed fire - he can fill in on existing burn teams so they can get their work done, and this teamwork will help establish a history of trust with other staff. He'll be more active on the fire-control side of things.

- Already in communication with Forestry staff – he has already worked with a lot of them, worked on an article with American Bird Conservancy, and got pulled into Natural Heritage Inventory training.
- Craig from Douglas Co. Forestry says the 700,000 acres of county forests will be critical. What they really need in order to do jack pine burns is a burn boss; they already have the crew and the equipment. Jack pine restoration and prairie grouse will go hand in hand.
- Duran in Washburn Co. - clarification on biomass harvesting. The guidelines are being developed, and we can make sure the forest certification still allows for harvest. They need flexibility in the jack pine restoration guidelines. Their own Silviculture Handbook was a bit too restrictive. Is that something that can be reviewed? Yes, it's being reviewed right now! Adrian Wydeven is the main point of contact for that work. Bob was on the Biomass Guidelines review committee.
- What about Kirtland's Warblers? They could enter into the discussion. That block-style management could fit in well with what we're already doing. There's a lot of interest, especially from the Bureau of Natural Heritage Conservation. Kirtland's Warblers could be a focal species for the Working Lands for Wildlife program (what became of the old WHIP program). If WI was a focal area, that would bring in a lot of money for the non-industrial private lands.
- Bayfield Rolling Barrens – a 1,000-acre core area is being cut right now, and the surrounding areas will also be cut so they're in the same age class. It'll end up being a 3,500-acre block. Their planning template deserves recognition; it goes out to 2082. They were given an award recently to keep the momentum going.
- Kirby in Spooner - certification means you're following a plan your constituents approve, which is important. Public land = long-term landscape that requires thinking beyond our lifetimes. Rolling Barrens are some of the most rewarding work he's done.
- Burnett County - needs work from both sides to meet objectives.
- Wisconsin Biomass Harvesting Guidelines, 2008. Bob was on the team taking a second look in 2012. Important to note that you don't have to strictly follow these guidelines if they don't match up with the on-site objective. They prohibit biomass harvesting on sandy sites, which really threw a lot of people off, especially in the

Northwest Sands. Some research brought up enough evidence that whole-tree harvest removes too many nutrients, so that prohibition will stay in place (with a few potential modifications). Another example of "softening": new guidelines will say to minimize disturbance of woody debris during logging; the old guidelines used the term "limit". The revision team is trying to change the perception that these guidelines are an obstacle.

- USDA Forest Inventory and Analysis data caused some alarm regarding the loss of jack pine (reported a 40% decrease since 1996 and a 50% decrease since 1983, with 5.9 million tons of biomass in jack pine in 2012). Of course, the greatest volume of mature jack pine matured during that time period. We still have jack pine on the ground, but it's at a younger stage and therefore comprises less jack pine. 40 acres of mature jack pine is equal to 400 acres of seedling/sapling jack pine. Keep in mind that that jack pine needed to be harvested, BUT there was conversion to red pine and poor conversion at the same time. It's a complicated situation. 75% of Wisconsin's jack pine is in the Northwest and Central Sands.

- Wildlife Action Plan - Bob will ensure that the Northwest Sands remains globally significant, and we'll probably have the opportunity to put even more focus on it.

- We reached out to some of the friends groups and told them the history, showed them the Corridor Plan, talked about what Bob's doing, and asked for help getting the information and education out to the public to build support. Bruce Moss has been pretty involved. Our scientific and balanced approach is seen well. Our goal is to engage the public with positive messages and a deeper look into the value of the resource. Minnesota put together a brochure for their Prairie Conservation Plan, and we might do the same thing. There might even be a book in the works. Bob will be leading a Natural Resources Fund tour to the Germann Road Fire site.

- We've talked to Gary Zimmer, the Ruffed Grouse Society, American Bird Conservancy, and the Sharp-tailed Grouse Society. It's a new position so Bob doesn't have a whole lot of support money, so he's working on writing grants. Synergy between states is important (particularly Minnesota's St. Croix State Park). The Lyme St. Croix Forest Company already has a reforestation plan for the Germann Road Fire site, and is willing to take ecological concerns into consideration.

- We're still working out the details of who will do what, but Bob is still hoping to work with the private industrial folks who span county boundaries. The Natural Resources

Fund tour will be taking place on June 14th. Scott Hull recommends talking up the plan; NRF likes to fund outreach & education. Bob primarily needs money to travel and talk about the work; a lot of the actual work will pay for itself. Scott Walter is wondering if we could set up some sort of event like the Prairie Chicken Festival (something the Sharp-tailed Grouse Society would love). The friends groups suggested an auto tour tied in with local businesses (something that really intrigued the committee).

Occupancy modeling approach to population monitoring

- "Sharp-tailed Grouse Occupancy Surveys & Demographic Modeling"
- Background from Hull: as the Sharp-tailed Grouse Management Plan and Corridor Plan wrapped up, we came up with some information and research needs. At the same time, the DNR went through a new research prioritization process, and sharptails made it through that process, which is a big deal! The agency has made it a priority to keep working on this bird. We got a Pittman-Robertson grant through the research section to fund Mike Hardy's work with Ben Zuckerberg at UW-Madison.
- Research objectives
  - Occupancy & distribution
    - Disturbance dynamics
    - Focus on the matrix
  - Connectivity & dispersal
  - Metapopulation dynamics (helps identify stepping stones)
  - Access viability in NW sands
  - Evaluate alternative management scenarios
- Overview
  - Occupancy survey design: "standard design" surveys at 117 survey routes. Three repeat visits from April 1 through May 23, 2014. Rotate observers and survey order. False negative rate $\leq$ 0.12 when p $\geq$ 0.50 (p = 0.54 $\pm$ 0.11 in Upper Peninsula of MI).

- Patch dynamics: candidate patches come from Reetz's habitat suitability model, where the predicted suitability is ≥ 0.70 and patch size is ≥ 10 hectares. The patches aren't on wildlife management areas (since this study is primarily interested in the matrix, and the WMAs will be surveyed by other people anyway), and there are 398 total patches.

- Stratification: stratified random design, proportional allocation of routes among strata, random patch selection within each stratum. 5 strata correspond with one of the top priority linkages identified in the Corridor Plan.

- Recent large-scale disturbances: sub-stratify by area, allocate routes proportionally. 2011 storm damage / subsequent harvest (candidate patches or 2011-13 timber sales); 2013 Germann Road fire (random points in burned area)

- Survey route placement: select a patch, delineate the route on roads as close as possible to the patch, lay out 8 survey stations at regular intervals, buffer by 1/2 mile to ensure good coverage. They're really at the mercy of the road placement. Every route will be ground-truthed and modified as necessary before the surveys are run.

- Survey protocol: begin 30 minutes before sunrise, run 3 routes per surveyor per day, 5-minute observation period, estimate direction/distance to STGR, observation-level covariates measured for temperature, wind speed/direction, ambient light, and ambient noise. Those things are most likely to influence detection probability rather than occupancy.

- Follow-up visits: pinpoint "new" lek sites, collect habitat data for both lek sites and paired random points within the patch, early morning counts (here's where we could engage citizen scientists, maybe using the calendar for reserving blinds), feather collection to analyze genetic structure, connectivity, and hopefully demographic data.

- Detectability (this spring they'll be surveying 117 of the 398 candidate patches identified, which is over 25%. Mike is confident that they'll be getting pretty good coverage, although that might change once they actually get on the ground. How tight will the protocol be? Can observers deviate from the route to investigate a potential bird? No, they have to record it is a "maybe" and go walk in later to check it out. They won't ignore birds that they see outside the routes. Mike thinks false negatives will be more of an issue than false positives. Nancy is wondering why we won't be using call-backs. Hull: because you'd have to do

it for every single point, and it would be difficult logistically, and it would introduce a bias that we're trying to avoid.

- Demographic modeling: the vital rates that make this population tick are reproduction, nest survival, brood survival, winter survival, and breeding season survival.
  - Sensitivity: which variables have the strongest influence?
  - Exposure: where are birds most vulnerable?
  - Addressing uncertainty with multiple models: initial probabilities ("confidence"), compare results with predictions, update probabilities. With repeated iterations, we should see that one model gains more support.
- Population viability analyses: stochasticity in vital rates/environment; multiple iterations; approaches include either probability of persistence or minimum viable population.
- PVA elasticity analysis: which parameters have the strongest influence? Perturbation of demographic variables. Example: Eberhart-Phillips 2012. Assess effectiveness of management actions.
- Conclusions: not a silver bullet. Potential outcomes include: ID of sensitivities & hotspots, elucidation of metapopulation dynamics, location of potential stepping stones within NW Sands corridor, evaluation of alternative management scenarios, and ultimately more effective conservation.

Evaluation of Sharp-tailed grouse permit allocation protocol

- Current formula based on lek counts (number of males observed)
- Committee recommended 0 permits in 2013, though the formula suggested that permits could be issued in DMUs 2 and 8. Decision based on:
  - Genetic evidence suggesting genetic isolation; no evidence of movement
  - Estimated Ne of 6.3 (populations with Ne < 50 considered to be prone to deleterious effects of genetic drift)
  - Limited data suggesting recent harvests may have hindered population growth (correlation in 6 out of 8 cases)

- Considerations:
  - 2013 decision based largely on genetic concerns; is it possible / necessary to develop a quantifiable "threshold" that suggests the population is both demographically and genetically healthy enough to sustain a harvest?
  - Can we rely on a "softer" qualitative approach, and annual evaluation of multiple data sources? Would this be acceptable to the WPT and the public?
  - Can the new lek surveys starting this spring inform the decision? Should we institute a 3-year moratorium on harvest (i.e., wait for the study to be completed)? Maybe this can be a soft/cautious moratorium while we wait for more information to come in.
- Nancy is wondering how much change we can actually expect to have taken place since last year (i.e., what impact the closed season had on the grouse). It's not like we had fantastic brood-rearing conditions. Mark is worried about how much support the program/wildlife areas may have lost as a result of the closed season. He's not saying we need to have a hunt, but we need to make sure we preserve the potential for a hunt (referring to the events at Pershing in the 90s). Social consequence.
- Friends of Crex is huge, and their logo is a sharp-tailed grouse. But some members think the focus on Crex is moving away from sharptails. The public seems to view them as a more viable species when they're huntable (until, as Nancy said, there aren't any left to be hunted). Hull would love to crack this nut a little more and figure out how important huntability really is. Nancy agrees - we should be scientists and figure out what we need from this species in order to be able to hunt it (although Hull would disagree and say that science doesn't have a whole lot to do with it, aside from evaluating risk). After some discussion, however, it doesn't sound like we're too interested in investigating a genetic trigger in the short-term. We just won't have that information this spring or even next spring. However, we do need to investigate the social implications of our various decisions.
- Mike Hardy: If the basis for issuing zero permits is the low population size, doesn't that give us a threshold? Should we suspend harvest as long as the effective population is less than 50? Yes, that would be good information to have, but Brad isn't too confident in the actual number. We know it's low, but not how low it really is. A couple of years down the road, once the birds have had a chance to respond to recent disturbance events and habitat work, it would be great to estimate the effective population again.

- Kris: did we get any actual complaints? Dave can't say STGS lost any members, but they did get some comments from disappointed hunters. He thinks their membership would tolerate a handful of years without harvest. Nancy actually had people who were glad the season was closed. Scott Walter didn't get any calls, positive or negative. Hull still thinks it would be valuable to us as a committee to know more about the people we're trying to serve (beyond the annual survey of permit holders). He wants a focus group.
- Developing our approach
  - Concern: degraded public support for habitat work without STGR season
  - Comment: don't try to use genetic data as part of the allocation decision
  - We have the potential to explore the importance of harvest and hunting seasons to public interest in property management (human dimensions research project).
  - It looks like our final decision is to go with the current framework, evaluating lek counts, new survey results, and other data to make decisions annually. We'll recalibrate formulae to reflect recent permit allocations. In essence, we're looking at a "soft" moratorium with annual evaluations for information.

Partner updates & announcements

- Craig: we already covered most of his stuff, but their new biologist is big into prairie grouse. He's the editor of one of the prairie grouse consortium newsletters. He might be contacting Scott W. looking for stories.
- Bob: can distribute things to the county forest offices along Mike's routes. Mike wants to finish getting the routes set up, and then he'll look at ownership and contact everybody all at once to tell them what's going on and when the surveys will be run. He still needs to make some revisions to the protocol and will keep Bob updated.
- Wisconsin Sharp-tailed Grouse Society: they have a meeting coming up on April 26 & 27 at the Douglas County Wildlife Area field trial building. They'll be going to the Germann Road Fire site as a field trip. They met as a board with the Northern Region forestry supervisors last fall regarding prescribed burning, particularly on Crex. STGS has had a feeling that burning efforts on Crex have been slowing down, and it concerns them. That feeling wasn't reinforced at the meeting; the forestry staff sound like they'd like to work with STGS, but they're just short on staff.

- U.S. Forest Service: Tom is serving as Dan Eklund's temporary proxy, and appreciates the chance to be part of this group. He'll be the field manager at Moquah Barrens for the wildlife side of things. Their ability to line up the forest plan with management of savanna habitats will be steered more aggressively toward sharptail management. They did take a little heat for their spring burns from the turkey hunting contingent, and a former forest manager thought the spring burns were counterproductive to sharptail management. They've put together a mechanical brushing program that they'll probably use to hit aspen, and with the restoration of the GLRI funding, things are looking up. Their work will be more aggressive toward sharptail management. There's a new joint NRCS/USFS watershed program that's warming up, and it might provide some funding for Moquah or other areas in the Lake Superior watershed.